



**STATE OF MONTANA
MONTANA DEPARTMENT OF TRANSPORTATION
JOB PROFILE**

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Update

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Formal Review

Date Submitted _____

SECTION I - Identification

Working Title:

Utility Engineering Specialist

Department:

Transportation

Job Code Number: 173296

Division & Bureau:

Engineering Division
Right of Way Bureau

Job Code Title:

Utility Engineering Specialist

Section & Unit:

Utilities Section

Pay Band: 6

Work Address:

2701 Prospect Avenue
Helena, MT 59620

Position Number:

Districts: 51033, 53088, 53206, 55206, 57206, 59206

HQ: 60001, 60016, 60024, 60028, 60048, 60078

Phone: 406-444-6077

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FLSA Exempt

☒

FLSA Non-Exempt

☐

Non-Union

☒

MPEA

☐

Blue Collar

Profile Completed By:

Rob Stapley
Right of Way Bureau Chief

Work Phone: 406-444-6080

Work Unit Mission Statement or Functional Description:

The Montana Department of Transportation's mission is to serve the public by providing a transportation system and services that emphasize quality, safety, cost effectiveness, economic vitality and sensitivity to the environment.

The Highways and Engineering Division prepares projects for bidding and coordinates highway construction. The Division is made up of the Traffic Safety, Consultant Design, Highways, Bridge, Right of Way, Materials, Contract Plans, Construction Services, and Construction Administration bureaus; the CADD Systems and Engineering Management Support sections; and five District Construction and Pre-Construction Offices in Missoula, Butte, Great Falls, Glendive, and Billings for budget and workforce purposes.

The Right of Way Bureau acquires land for transportation projects and administrative needs. It also provides assistance and payments to individuals and businesses relocated by highways; designs the right of way; and arranges for utilities relocation that conflict with highway construction.

The Utilities Section is the liaison between the Department and all utility and railroad companies, cities, counties, other state and federal agencies for utility type activities within highway right of way and highway activity on railroad right of way. The Utilities Section prepares all agreements for the relocation and payment of utility/railroad facilities in preparation for a construction project, monitors the relocation work for compliance with the terms of the agreement, state statutes, federal codes and Department policy. The Utilities Section approves all utility consultant agreements, utility contractor bids, all utility work orders for increased costs or major revisions to the agreement and approves payment for utility/railroad relocation work. The Utilities Section is also responsible for the Subsurface Utility Engineering Program. Utility agents in the headquarters office work in the Utility Section under the direction of the Utilities Engineering Manager. The utility agents in the field work under the direction of the Engineering Services Supervisor in each respective District, questions they have concerning utility issues are directed to the Utilities Engineering Manager.

Describe the Job's Overall Purpose:

This position manages and coordinates major utility relocation projects; administers contracts for project-related work; provides input and review of subsurface utility engineering (SUE) projects; and performs a variety of other duties in support of the Department mission and ongoing Bureau operations and activities. The position reports to the Utilities Engineering Contract Specialist and does not supervise other agency personnel.

SECTION II - Major Duties or Responsibilities

This section should be a clear concise statement of the position's major duties and the approximate percent of work time for each duty

% of Time

A.	<u>PROJECT MANAGEMENT</u>	40%
1.	Serves as a functional manager for utility engineering projects, including responsibility for planning, allocating, and administering project resources (i.e., human, material, and financial), schedules, and ongoing operations; providing specialized services to support project delivery; coordinate project communications and logistics; and ensure quality, cost-effectiveness, and conformance with specifications and requirements.	
2.	Provides professional consultation and technical expertise at preliminary plan reviews with consultants, designers and design supervisors, right of way agents and supervisors, and others to determine the overall adequacy of utility information and data as well as adherence to applicable design standards. Develops and recommends design changes to the Utilities Engineering Manager, the Engineering Services Supervisor, and other appropriate parties to avoid costly utility conflicts and promote cost-effectiveness. Responsible for prioritizing projects for utility companies to ensure project delivery and reduce or eliminate contractor claims.	
3.	Directs Department and consultant engineering survey crews, for utility/railroad relocations, staking right of way, cut and fill slopes, pipes, approaches, signals, centerlines, and other features to determine correct placement of utilities. Stakes right of way, pipes, cut and fill slopes when department or consultant engineers are not available. Reviews final staking of utilities with utility engineers to determine necessary adjustments before commencing utility relocation projects. The incumbent conducts final reviews of various factors related to water quality, wetlands, hazardous waste, endangered species, archaeological/historical sites, and	

other issues requiring additional permits. Reviews and finalizes Utility Occupancy and/or Encroachment permits to ensure compliance with ARM.

4. Computes overhead clearance of power lines and telephone lines to ensure proper clearance will be maintained after highway construction is complete and that the construction can be accomplished in a safe manner. Computes clearance of pipes by interpolating grades of storm drains, flow lines of pipes, cuts, fills and sub-cuts to determine utility conflicts with underground utility facilities.
5. Computes grades of cut slopes, laterals for storm drains, ditches, and pipes to determine utility/railroad underground depth required when installing relocated utility facilities. The incumbent reviews and interprets hydrologic information and data, performs necessary computations, and develops conclusions related to the appropriate facilities depths according to Department standards and permitting guidelines.
6. Evaluates context sensitive design issues to ensure that project designs meet standards for traffic, lighting, landscaping, aesthetic, disability/accessibility, and community standards. Identifies deficiencies and coordinates with consultants, local government and community representatives, Department personnel, and others to ensure that all requirements are met. This involves researching, developing, and/or negotiating context sensitive design standards that represent multiple and often conflicting interests and requirements of all parties.
7. Evaluates and integrates relevant noxious weed issues into project designs to ensure conformance with State and local requirements. Ensures that project sites are treated for noxious weeds, seeded for landscape recovery, and appropriately maintained for at least two years following project delivery. Identifies and resolves deficiencies associated with designs, spraying, recovery, maintenance, and other requirements.
8. Coordinates with Right of Way staff to ensure that property is appropriately secured and advises utility engineers of right of way changes. Assesses final right of way and design changes to develop and recommend necessary utility realignments to utility companies and contractors.
9. Establishes commencement dates for utility relocation projects and notifies utility companies in writing. Establishes priorities for utility companies regarding relocation and construction projects to ensure compatibility with Department letting dates and project priorities.
10. Administers environmental plans to ensure compliance of projects with applicable environmental regulations and statutes. The incumbent assesses a variety of factors related to erosion, control, hazardous wastes, raptor proofing, and other issues; identifies compliance deficiencies; and develops plan modifications as necessary to ensure compliance.
11. Reviews and approves utility traffic control plans to ensure that safety standards are applied to speed limits, sign layouts, flagger layouts, and other factors. The incumbent identifies problems and develops and implements appropriate solutions before approval.
12. Monitors progress of relocation projects to ensure compliance with specific terms and conditions of individual agreements, update relocation crews on project requirements, and explain and/or implement adjustments to project plans. The incumbent determines modifications and adjustments to agreements in the field and initiates design changes and contract revisions as necessary.
13. Conducts or coordinates inspections of all phases of utility relocations to ensure the overall quality, safety, and contract compliance of projects and rectify identified problems. The

incumbent notifies utility companies and contractors of actual/potential problems and negotiates resolution of unsafe practices and conditions as well as contract compliance deficiencies. Writes utility work orders after appropriate reviews, calculations, and negotiations are finalized with utility representatives.

14. Conducts or coordinates materials inspections to verify the quality, quantity, and other terms and conditions of individual agreements. The incumbent compares materials records with applicable agreement criteria and utility standards. The incumbent identifies problems; notifies utility companies and contractors; and monitors the resolution of material deficiencies.
15. Resolves in-progress problems related to railroad/utility relocation projects to ensure the successful accomplishment of project timelines, specifications, and objectives. The incumbent identifies or responds to notification of project deficiencies, conflicts, irregularities, or other problems; consults with railroad/utility personnel and section staff as necessary; and develops solutions to routine, complex, or unprecedented problems. The incumbent authorizes scope changes, writes work orders and resolves conflicts associated with design changes, and develops contract revisions as necessary to implement solutions.
16. Approves, monitors, and coordinates multiple utility occupancy and encroachment permits on existing highway right of way to ensure that utility placements adhere to Department standards and prevent potential hazards to the traveling public. Works directly with the Rail Transit and Planning Bureau on review and final approval of utility related permits. Mandates utility relocations for placements without approved permits. Inspects soils compaction tests and backfill methods to ensure the integrity of roadways and inspects asphalt replacement to ensure the quality and depth of placement.
17. Maintains extensive files of all railroad/utility projects and reviews project files each week to provide ongoing updates regarding project progression, expiration dates, correspondence, records and dates of telephone conversations, and ready reference in response to detailed inquiries from railroad/utility representatives, project personnel, agency staff, and members of the public.
18. Responsible for overseeing utility issues on Community Transportation Enhancement Program (CTEP) and Montana Air and Congestion Initiative and Congestion Mitigation and Air Quality Initiative (MACI/CMAQ) projects.

B. CONTRACT ADMINISTRATION

40%

1. Reviews and analyzes SUE, utility, construction, and right of way plans and contracts to determine the overall adequacy and constructability of proposed projects. The incumbent assesses plans, cross-sections, and contracts; identifies conflicts, compliance deficiencies, and other problems; and consults with Utility Section and engineering staff as well as utility/railroad personnel to explain and resolve problems.
2. Conducts Utility Plan in Hand field reviews with involved utility/railroad engineers, city and county officials, public works directors, tribal representatives, and utility engineering consultants to explain the scope of construction projects and determine the extent of actual/potential utility conflicts. Interprets highway plans to determine necessary and cost effective re-routes and adjustments that facilitate planned highway construction projects. The incumbent may negotiate and justify adjustments to reach consensus on the best alternatives for utility relocation projects based upon Best Engineering Practices.

3. Develops cost estimates for utility and railroad relocations to provide location estimates for programming purposes. The incumbent computes the in-place cost of underground utilities (e.g., gas lines, water lines, etc.); surface and aerial facilities (e.g., telephone lines, railroad communications, etc.); and other features that may impact proposed construction projects.
4. Assesses utility/railroad cost estimates and plans to ensure that terms and conditions of agreements are met and that the cost estimates represent the most economical method of relocation. Consults with utility/railroad companies to correct errors. Assists in review of utility and railroad estimates, agreements, and coordinates review of agreements with other MDT sections and FHWA. Interprets and analyzes field review information.
5. Negotiates fair market prices for railroad right of way. The incumbent must evaluate Department appraisals; ownership documents (deeds, easements, etc.), encumbrances, and encroachments; and topographical and geographical features that may enhance or depreciate the final purchase price; reviews legal descriptions and computes areas. Writes deeds and prepares exhibits for inclusion in the conveyance from the railroad. Writes other project documentation according to standardized formats and requirements.
6. Develops utility/railroad agreements to describe relocation work, cost sharing of work, special circumstances required by the contractor such as coordinated work. Writes contract special provisions to coordinate utility/ highway construction work for inclusion in the construction contract. Based on total utility work involved, prepare funding documents for department and FHWA approval to obligate funds for utility relocation work. Write authorization letters advising utility companies and districts when work can proceed. Write other project documentation using standardized formats.
7. Conducts regular utility meetings for each project to review construction issues to address any problems. Resolves disputes with utility companies and utility contractors regarding the adequacy of work to ensure the overall quality, timeliness, and cost effectiveness of relocation projects. The incumbent evaluates optimum performance standards under individual site conditions and cost/time parameters to negotiate appropriate settlements with utility companies and contractors. Exercises authority to suspend work for failure to comply with terms and conditions of individual contracts or other issues (e.g., safety, environmental hazards, etc.).
8. Commits the Department to modified or expanded work contracts for relocating utilities around sensitive environmental areas, historical sites, and other community interests to resolve disputes with landowners and other affected parties. The incumbent must assess individual circumstances of proposed projects; objections or complaints from interested parties; and the impacts of various alternatives to project parameters (e.g., time, cost, safety, etc.).
9. Monitors and responds to interrelated project issues involving other agencies, local governments, property owners, and other parties to generate cooperation and consensus on project completion and resolve ongoing problems or conflicts.
10. Maintains daily reports of all materials and utility project completion ratios to track projects and ensure accurate utility payments. The incumbent approves monthly and final payments through statistical methods and determines appropriate payment adjustments for inadequate or incomplete work. Estimates and approves final project payments based upon analysis of field notes, reports, final plans
11. Audits railroad/utility project billing to ensure accurate, complete, and timely payments by verifying the accuracy of invoices, identifying and resolving discrepancies, and processing payments. The incumbent initiates additional work orders for utility cost estimate overruns. Maintains field notes, reports, drawings, and records to document utility billing.

C. SUBSURFACE UTILITY ENGINEERING 15%

1. Solicits potential SUE projects from Districts, Consultants, and Department design sections and coordinates with SUE consultants to locate, survey, and map utility facilities to provide comprehensive information and data related to future highway construction projects.
2. Consults with various utility companies, city and county officials, and other parties to explain the features of the SUE program and promote its cost-saving benefits.
3. Conducts or coordinates on-site inspections of SUE contract work to ensure compliance with the terms and conditions of individual contracts (e.g., traffic control, right of way, etc.). Identifies and evaluates infractions and determines appropriate responses, including work stoppages, resurveying, and other actions as appropriate.
4. Reviews SUE Phase I plans and consults with designers, SUE consultants, and Engineering Services Supervisor to determine locations for Phase II utility vacuum excavations. Reviews SUE Phase I and Phase II plans to assess the overall accuracy and completeness of information and data related to elevations of facilities, stations, and distances. Identifies errors and coordinates with SUE consultants to resolve problems. Distributes final SUE information and data to appropriate Department personnel.
5. Audits SUE contract billing to verify the accuracy and completeness of invoices. Coordinates with SUE consultant to resolve errors and discrepancies and/or rejects inappropriate costs as warranted.

D. OTHER DUTIES 05%

This position performs a variety of other duties as assigned by the Utilities Engineering Manager and/or Right of Way Bureau Chief in support of the Department mission and Division objectives. This includes acting as MDT's liaison in its involvement with other state and federal agencies, city and county officials, railroads, utility companies, and the public on issues related to utilities; representing the Department's utility engineering interests at public meetings and professional conferences; providing training, education, and professional and technical assistance; directing special projects; participating in ongoing training and educational programs; and performing a variety of other duties as directed.

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1. ***The following duties and/or specific tasks listed under section II above are considered "essential functions" because they require specialized expertise and skill and are the primary reasons the job exists (they must be performed by this position with or without accommodations):***

Duty A: Project Management
 Duty B: Contract Administration
 Duty C: Subsurface Utility Engineering

The following mental and physical demands are associated with these essential functions:

PHYSICAL

- Light lifting (less than 10 lbs.)
- Ability to travel through uneven terrain and/or active construction sites
- Remaining seated for extended periods of time, with occasional walking; standing; bending
- Travel within the state to project locations, and out of state travel by airline to national conferences and meetings.

- Operating a personal computer
- Communicate in writing, in person, and over the phone

MENTAL

- Deal with the public on a regular basis
- Ability to multi-task
- Demands for accuracy in all aspects of work
- Ability to meet inflexible deadlines
- Decision making that affects public health and safety
- Computing arithmetic operations
- Comparing data
- Compiling information
- Analyzing
- Coordinating
- Synthesizing
- Negotiating
- Instructing

2. **Does this position supervise others?** ☐ Yes ☒ No

Number directly supervised: 0.0
Position Number(s) of those supervised: N/A

3. **Attach an Organizational Chart.**

SECTION III - Minimum Qualifications - List minimum requirements for the first day of work.

Critical knowledge and skills required for this position:

KNOWLEDGE:

This position requires thorough knowledge of the principles and practices of highway engineering; mathematics; utility and railroad design and construction; state and federal regulations pertaining to utility and railroad placement and relocation; right of way acquisition; project management; contract administration and claims management; and environmental issues and regulations as they apply to road construction and utility relocation projects.

SKILLS:

This position requires skill in the use of standard office software (e.g., word processing, database, spreadsheet, etc.); analyzing and interpreting technical, legal, and contract data and information; and excellent written and verbal communication skills.

Behaviors required to perform these duties:

See MDT Core Behaviors

Education:

Check the one box indicating minimum education requirements for this position for a new employee the first day of work:

- | | |
|---|--|
| <input type="checkbox"/> No education required | <input type="checkbox"/> Related AAS/2-years college/vocational training |
| <input type="checkbox"/> High school diploma or equivalent | <input checked="" type="checkbox"/> Related Bachelor's Degree |
| <input type="checkbox"/> 1-year related college/voc. training | <input type="checkbox"/> Related Master's degree |

Please specify the acceptable fields of study:

Acceptable: The position requires a Bachelor's degree in Civil Engineering, Civil Engineering Technology, Design, or a related field.

Other education, training, certification, or licensing required (specify): This position requires a valid Montana driver's license.

Experience:

Check the one box indicating minimum work-related experience requirements for this position for a new employee the first day of work:

- | | |
|---|--|
| <input type="checkbox"/> No prior experience required | <input type="checkbox"/> 3 years |
| <input type="checkbox"/> 1 year | <input type="checkbox"/> 4 years |
| <input checked="" type="checkbox"/> 2 years | <input type="checkbox"/> 5 or more years |

Other specific experience (optional): The position requires two (2) years of applied experience in highway engineering, highway project management, highway design, right of way, negotiation, and/or utility related experience.

Alternative Qualifications:

This agency will accept alternative methods of obtaining necessary qualifications.

☒ Yes ☐ No

Alternative qualifications include: Each year of directly related experience (described above) may substitute for one (1) year of education toward the required degree.

SECTION IV – Other Important Job Information

- | | |
|--|--|
| <input type="checkbox"/> Fingerprint check | <input checked="" type="checkbox"/> Valid driver's license |
| <input type="checkbox"/> Background check | <input type="checkbox"/> Other; Describe |

Other information including working conditions such as shifts, lifting requirements, travel or hours.

SECTION V – Signatures

Signature indicates this statement is accurate and complete.

Employee:

Name: _____ Title: _____

Signature: _____ Date: _____

Immediate Supervisor:

Name: _____ Title: _____

Signature: _____ Date: _____

Bureau Chief:

Name: _____ Title: _____

Signature: _____ Date: _____

Division/District Administrator:

Name: _____ Title: _____

Signature: _____ Date: _____

Department Designee:

Brent Rabe/Designee

Human Resources Administrator
Human Resources Division

Signature: _____ Date: _____